## 4.7.1 Purpose & Intent

The purpose of this part is to guide development in steeply sloped or unstable hillside areas consistent with Cornerstone 2020 Comprehensive Plan guidelines, to protect natural areas and features and to locate development, where possible, in areas that do not have severe environmental limitations. This section intends to regulate hillside development in order to protect life and property from hazards due to slope, unstable soils, earth movement and other geologic and hydrologic hazards. More specifically, these regulations are intended to:

- A. Maintain property values and avoid property damage due to development of steep slopes and unstable soils;
- B. Incorporate current design, landscape architecture, architecture and civil engineering practices to preserve, enhance, and/or promote the stability and environmental quality of hillside areas;
- C. Preserve or enhance the beauty of the landscape by encouraging the maximum retention of natural topographic features including slopes, ridge lines, vistas, and natural plant communities;
- D. Promote a safe means of ingress and egress for vehicular and pedestrian traffic to and within hillside areas while at the same time minimizing the scarring effects of hillside street construction;
- E. Encourage imaginative and innovative building techniques to create buildings suited to natural hillside surroundings; and
- F. Enhance neighborhood character and community identity associated with the County's hillsides.

## 4.7.2 Applicability & Exemptions

#### A. Applicability

This part shall apply to all land disturbing activity, including new development and subdivision, proposed on:

- Properties that contain slopes of 20% or greater ("steep slopes"), or
- 2. Properties that contain soils rated as "unstable" on Core Graphic 5

#### B. Land Disturbing Activity

Land disturbing activity includes the following:

1. Clearing of more than 5,000 square feet of forested area for development;

<u>From Definitions [Chapter 1 Part2]:</u>

## Land Disturbing Activity

 All construction, demolition, reconstruction modification, extension, or expansion of structures or parking areas, placement of fill, dumping, storage of earthen materials, excavation, land clearing, clear-cutting, tree and vegetation removal, grading, grubbing or any similar activity or combination thereof that changes the natural cover or topography creating the potential for erosion and contribution to sediment.

- Grading, excavation, construction of foundations, footings or retaining walls, or alteration of the ground surface, except for activities defined as agricultural operations in KRS 224.71-100 through 140;
- 3. The installation of utilities, including but not limited to water, sewer, natural gas, electric, telephone and cable.

## C. Exemptions

This part shall not apply to the development activities listed in 4.6.1.B.

## 4.7.3 Development on Steep Slopes

A. Measurement of Steep Slopes

The restrictions on development on sloped areas in this part refer to existing (pre-development) site conditions. Slopes shall be determined by dividing the horizontal run of the slope into the vertical rise of the same slope and converting the result into a percentage value.

Steepness of slope shall be measured from the points with the highest and lowest elevation between slope breaks. The Planning Director in consultation with NRCS representatives shall make the final determination of what constitutes a slope break.

#### 4.7.4 Land Disturbing Activity on Unstable Soils.

- A. Land disturbing activity on unstable soils (as depicted on Core Graphic
  5) is permitted only in accordance with the Comprehensive Plan and in keeping with the following:
  - The Planning Commission determines the proposed construction cannot be accommodated on a portion of the site that does not contain unstable soils; and,
  - 2. The application for the land disturbing activity includes a geotechnical survey report, prepared in accordance with best practices. For land disturbing activity in conjunction with a plan review (preliminary subdivision plan, development plan, conditional use plan, etc.) required by this code, a geotechnical report shall be submitted with the application for the required review. Such survey will ordinarily include information obtained by drilling, locating of bedrock and testing of soils for shear strength. The report shall be prepared by a licensed and Kentucky-registered professional engineer practicing in accordance with KRS 322 and whose area of expertise includes geotechnical engineering. In order for the proposed construction to be approved, the report must:
    - a. conclude the proposed disturbance and/or construction can be carried out in a manner that will minimize impact on the slope and will not adversely impact foundation stability on the subject property and surrounding properties; and,



- conclude that stable foundations can be constructed on the site and identify the mitigation measures and construction practices, including construction supervision, necessary to assure the stability of buildings and foundations to be constructed on the site; and,
- c. include erosion and sediment control measures necessary to assure compliance with the Jefferson County Erosion and Sediment Control Ordinance; and,
- 3. The applicant provides a plan, acceptable to the Commission, that specifies how the mitigation measures and construction practices including construction supervision, necessary to assure the stability of buildings and foundations to be constructed on the site as recommended in the geotechnical report will be implemented.
- 4. Prior to requesting a full building permit, the applicant shall provide certification from a professional engineer having the qualifications described in paragraph 2, above, that site preparation and foundation construction were carried out in accordance with the approved mitigation measures and construction practices.
- 5. Prior to requesting a certificate of occupancy for any structure on the site, the applicant shall provide certification from a geotechnical soils engineer certifying that land disturbance and construction were carried out in accordance with the mitigation measures and construction practices, including inspections, set forth in the geotechnical report.
- 6. Prior to site disturbance, the applicant shall submit a bond of sufficient amount to cover the cost of site stabilization.

# 4.7.5 Land Disturbing Activity on Slopes Greater Than 20%.

- A. Land disturbing activity on slopes greater than 20% is permitted on lots existing prior to the effective date of this regulation and on lots created by minor plats submitted for review after the effective date of this regulation only if the activity is in keeping with the Comprehensive Plan and the proposed activity complies with the following standards:
  - The Planning Director finds that the design and configuration of the development results in the minimum disturbance of slopes greater than 20% necessary to accommodate the proposed use of the site; and,
  - 2. Compatible on-site utilities (electric, phone, cable) are placed in a common trench; and,
  - 3. Shared access driveways serving single family residences are used when this technique reduces pavement and grading of steep areas.
- B. Land disturbing activities on slopes greater than 20% is permitted on lots created by major subdivision after the effective date of this regulation

only if the activity is in keeping with the Comprehensive Plan and the proposed activity complies with the following standards:

- The Commission finds that the design and configuration of the development results in the minimum disturbance of slopes greater than 20% necessary to accommodate the proposed use of the site; and,
- 2. Compatible on-site utilities (electric, phone, cable) are placed in a common trench; and,
- 3. Land disturbing activities on slopes greater than 20% and less than 30% shall be required to prepare a geotechnical survey report if the staff of the USDA Natural Resources Conservation Service determines such a study is warranted, given the site's soil and geologic characteristics. A geotechnical report shall be submitted for land disturbing activities on slopes greater than 30%. The geotechnical survey report shall be submitted with the application for land disturbing activities and with the application for a plan review (preliminary subdivision plan, development plan, conditional use plan, etc.) required by this code and shall be prepared in accordance with best practices. Such survey will ordinarily include information obtained by drilling, locating of bedrock and testing of soils for shear strength. The report shall be prepared by a licensed and Kentucky-registered professional engineer practicing in accordance with KRS 322 and whose area of expertise includes geotechnical engineering. The report shall include mitigation measures as needed to ensure stability and minimize environmental impact during site preparation and construction phases of the regulated activity. In addition, the report shall include erosion and sediment control measures necessary to assure compliance with the Jefferson County Erosion and Sediment Control Ordinance. The Planning Commission may approve the activity if the report opines and demonstrates that:
  - a. The slope's ground surface and subsurface are not unstable;
  - b. Development of the slope and associated mitigation measures will not increase the degree of risk of slope instability both onsite and on adjacent lands; and,
  - c. If a geotechnical report is required, the applicant provides a plan, acceptable to the Commission, that specifies how the mitigation measures and construction practices, including construction supervision, necessary to assure the stability of buildings and foundations to be constructed on the site as recommended in the geotechnical report will be implemented.

### 4.7.6 Independent Review of Geotechnical Survey Report

The Planning Commission may, on recommendation of the Natural Resource Conservation Service or MSD or the Planning Director, require an independent review of the submitted geotechnical survey report. Such review shall be conducted by a licensed and Kentucky-registered professional engineer practicing in accordance with KRS 322 and whose area of expertise includes geotechnical engineering. The reasonable cost of such review shall be borne by the applicant.

## 4.7.7 Development Potential Transfer Allowed

- A. Major subdivision development proposals submitted after the effective date of this regulation and which permanently preserve areas of the site with slopes greater than 20% may transfer the development potential (building sites or floor area) of the permanently preserved area to the remainder of the site subject to the following limitations:
  - 1. The subdivision is not being developed under the Alternative Development Incentives of the Land Development Code; and,
  - 2. Areas to be permanently preserved are preserved in a manner acceptable to the Commission (e.g., conservation easement, common open space, etc.); and,
  - 3. The area of the site to which development potential is being transferred is at least as large as the area from which development potential is being transferred (for example; if an applicant wishes to transfer development potential from 3 acres, the portion of the site to which development is shifted must be at least 3 acres); and,
  - 4. All lots in the proposed development meet the minimum alternative development incentive lot size of the applicable Form District; and,
  - 5. All lots in the proposed development meet the height, yard and setback requirements of the applicable Form District.
- B. The maximum development potential allowable for transfer shall be determined by one of the following methods:
  - One half of the theoretical development potential based on the number of acres preserved and the existing zoning of the area to be preserved (for example; if 3 acres of an R-4 site is proposed for protection, then 7 building sites could be transferred to other portions of the same property - 3ac x 4.84 units/acre / 2 = 7.26 units); or,
  - The realistic development potential determined by an engineered development plan including a preliminary geotechnical feasibility study and meeting all other requirements of the Land Development Code.

NOTE: Although lot sizes are reduced, setbacks are not reduced for density transfer lots. Consistent appearance throughout the subdivision is intended.